

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9952431A1] Breath analysis apparatus comprising: a spirometer, including a breath tube, which generates breath flow information and a breath sounds sensor situated in the breath tube, which generates breath sounds information.

IPC 1-7

A61B 7/00

IPC 8 full level

A61B 5/08 (2006.01); **A61B 5/087** (2006.01); **A61B 5/097** (2006.01); **A61B 7/00** (2006.01); **A61B 7/04** (2006.01)

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A61B 5/0823 (2013.01 - EP US); **A61B 5/087** (2013.01 - EP US); **A61B 7/003** (2013.01 - EP US)

Citation (search report)

- [DXA] WO 9103981 A1 19910404 - MURPHY RAYMOND L H [US]
- [XA] ONO ET AL.: "Separation of fine crackles from vesicular sounds by a nonlinear digital filter", IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol. 36, no. 2, February 1989 (1989-02-01), New York, US, pages 286 - 291, XP000186148
- [A] ROSQVIST ET AL.: "Toolkit for lung sound analysis", MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol. 33, no. 2, March 1995 (1995-03-01), Stevenage, GB, pages 190 - 195, XP000504664
- [A] COHEN ET AL.: "Analysis and automatic classification of breath sounds", IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol. 31, no. 9, September 1984 (1984-09-01), New York, US, pages 585 - 590, XP002057861
- [A] COHEN: "Signal processing methods for upper airway and pulmonary dysfunction diagnosis", IEEE ENGINEERING IN MEDICINE & BIOLOGY, vol. 9, no. 1, March 1990 (1990-03-01), New York, US, pages 72 - 75, XP000117155

Cited by

EP4162271A4; US8715201B2; WO2007051556A3; WO2019241674A1

Designated contracting state (EPC)

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WO 9952431 A1 19991021; AU 4395297 A 19980424; AU 6851098 A 19991101; CA 2267378 A1 19980409; CA 2327809 A1 19991021; DE 69729472 D1 20040715; EP 0944355 A2 19990929; EP 0944355 B1 20040609; EP 0951866 A2 19991027; EP 0951866 A3 19991103; EP 0951867 A2 19991027; EP 0951867 A3 19991117; EP 0956820 A1 19991117; EP 0956821 A1 19991117; EP 0956822 A1 19991117; EP 0956823 A1 19991117; EP 1067866 A1 20010117; JP 2001505085 A 20010417; US 6168568 B1 20010102; US 6261238 B1 20010717; WO 9814116 A2 19980409; WO 9814116 A3 19980806; WO 9952437 A1 19991021

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